

AMBASSADOR**Model PA142-143**

General Description : A seven-valve (including rectifier) amplifier incorporating straight receiver circuit. Audio output 10-12 watts. Released 1943.

Power Supply : A.C. mains, 200-250 volts.

Valves : (V₁) VP41; (V₂) HL41DD; (V₃) AC/HL; (V₄) AC/HL (phase reverser); (V₅ and V₆) Pen 45s (Class A, push-pull output); (V₇) UU6.

General Notes : These two amplifiers are basically the same except for the radio section. In the 143 this is a tunable H.F. detector receiver covering Medium Waves. In the 142 the receiver has a two-way switch giving the Light Programme and the Home Service. These are pre-set for the various areas.

Two Pen 45's are provided in push-pull. These are separately biased, and should give 10-12 watts of output available at an output impedance of 3.5, 7.5 or 15 ohms. A phase-reverser valve is employed using a self-balancing input circuit which should compensate for discrepancies in valves. Two A.F. amplifiers are used with controls arranged to fade either mic/radio or gram/radio. On the 142 a microphone transformer is incorporated in the chassis, built in a screened box. The 143 will need an external transformer if a low-impedance microphone is to be used.

Both chassis employ battery bias to the first triode, if this goes O/C the two volume controls will have little effect on the volume. It can be replaced by a standard auto bias circuit, in the first triode cathode.

No decoupling is employed on the A.F. and output cathodes. This gives a degree of negative feedback.

On the 142 separate sensitivity controls to the two stations are provided, as volume equalisers. On the 143 equalising can be carried out by mistuning the trimmers.

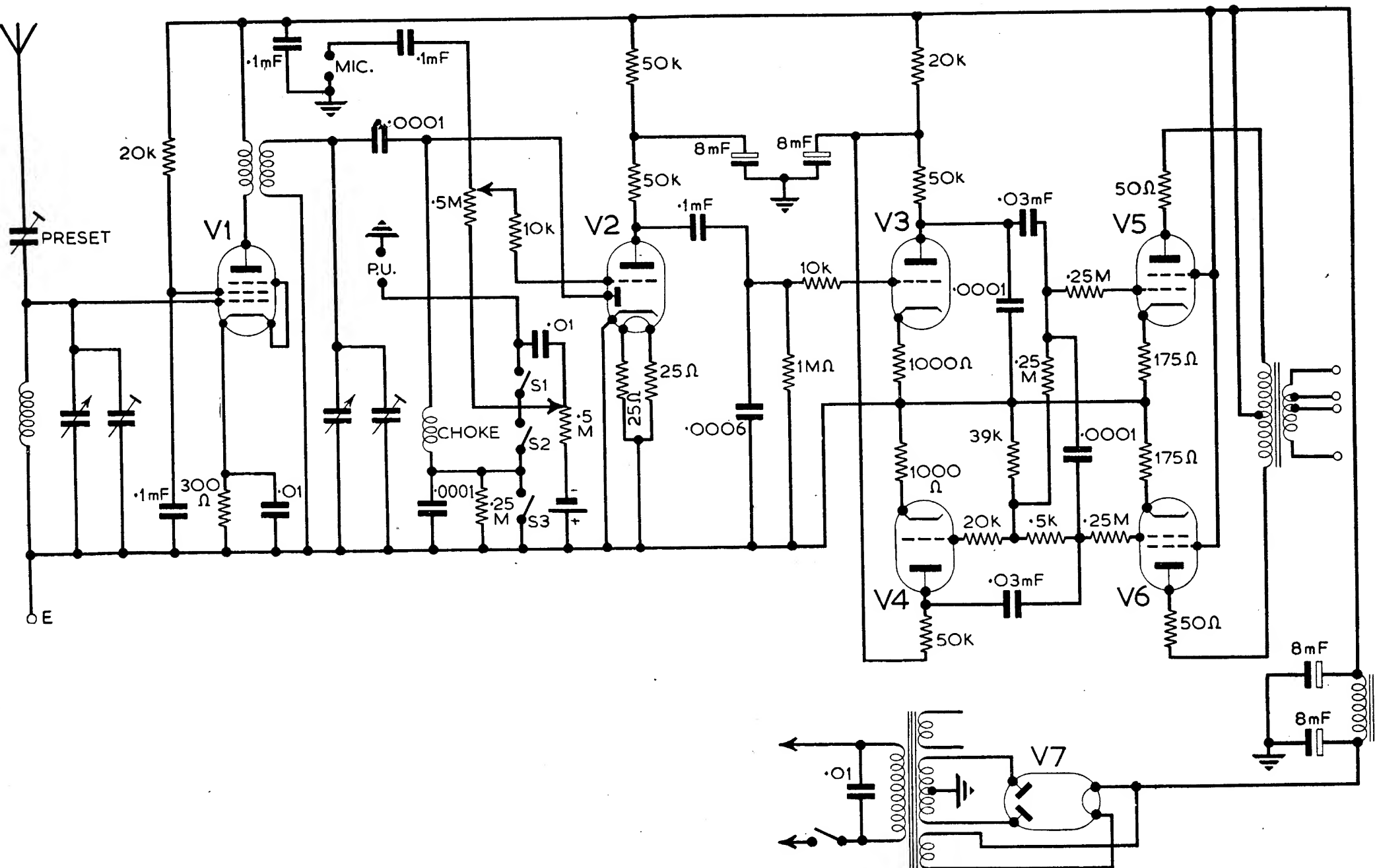
No tappings are provided on the mains transformers, these being rated for operation from 200 to 250 volts A.C.

Earlier models of 143 have a band-pass filter input and a built-in microphone transformer. The circuit shown is the later model.

If desired to replace a valve without withdrawing the chassis, the wooden bars on the front of the cabinet must be unscrewed.

Check Points : Measured with Avo Model 7.

V ₁	Anode 260 v., 9.7 mA.	Screen 200 v., 2.2 mA.
V ₂	Anode 70 v., 1.7 mA.	—
V ₃	Anode 85 v., 1.7 mA.	—
V ₄	Anode 85 v., 1.7 mA.	—
V ₅ or V ₆	Anode 244 v., 43.5 mA.	Screen 258 v., 8.5 mA.



Circuit Diagram—Ambassador Amplifier Models PA142-143